

Deriving the Past Tense augment

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Verbal morphology in the Greek past tense morphology involves the prefix *e-*, traditionally known as past tense augment, which is often taken to depend on stress placement and the prosody-morphology interface. As recently argued in Spyropoulos & Revithiadou (2009), this augment is a segmentally empty prefix with lexically encoded stress, realized after fission or when another formative does not satisfy the $T_{[+PAST]}$ node. This paper presents new data from Cypriot Greek simple verb forms and verbal complexes showing that the existing view of the augment as a stress exponent does not apply in this variety of Greek. The data from this non-standard variety of Greek contribute to a better understanding of the past tense augment by re-defining a morphological analysis that explains the phenomenon in Cypriot Greek.

1. Introduction

Tense formation in Standard Modern Greek, as well as Cypriot Greek¹, shows a two-way distinction, identified as past and nonpast. As reported in Holton et al. (1997), the future is formed peripherastically in Greek, *i.e.* it consists of a two-word phrase rather than a single word as in other languages. This periphrasis involves the element *θα* ‘will’ accompanied by the verb in the nonpast in Standard Modern Greek and *en na* in Cypriot Greek (Merchant & Pavlou 2017). Setting aside any interesting properties of the periphrastic formation of tense, this paper focuses on the morphology of tense in Greek: The distinction marked morphologically on the verb indicates the past and nonpast tense independently of other elements that combine with the verb syntactically.

¹The data reported here are based on judgments from the author, who is a native speaker of Cypriot Greek. Any regional or other dialectal variation between speakers is not included here.

(1) *Non-past*

- a. ðe -n -o
tie -IMPERF -NONPAST-1SG
'I am tying'
- b. ðe -s -o
tie -PERF -NONPAST-1SG
'I will tie'

As seen above, the verb marks aspect with alternations in perfective and imperfective and tense and person agreement surface as a single morpheme for the 1ST PERSON SINGULAR. Past tense is morphologically marked on the verb's morphology, and differs from (1) by marking tense with different suffixes and the augment *e-*, as shown in the examples below.

(2) *Past*

- a. e- ðe -n -a
PAST- tie -IMPERF -PAST-1SG
'I was tying'
- b. e- ðe -s -a
PAST- tie -PERF -PAST-1SG
'I tied'

These examples show that Past Tense in Standard Modern Greek is marked morphologically on the verb with different exponents based on person and the appearance of the augment *e-*. Comparing Standard Modern Greek and Cypriot Greek, the augment appears in the latter and not the first.

(3) a. ðjava -s -a

read -PERF -PAST-1SG

'I read'

Standard Modern Greek

b. e- ðjava -s -a

PAST- read -PERF -PAST-1SG

'I read'

Cypriot Greek

As will be discussed in Section 3, this contradicts the idea that the augment develops for the antepenultimate stress to be attained (van Oostendorp 2012) or that the antepenultimate stress is an exponent of the [+PAST] as a segmentally empty prefix with lexically encoded stress (Spyropoulos & Revithiadou 2009). The paper investigates precisely the morphology of these two components: the past tense suffixes and the augment to argue against previous analyses that characterize the morpho-syntactic representation of the Standard Modern Greek verb as possible explanations of the verbal morphology in Cypriot Greek.

Section 2 of the paper first discusses past tense suffixation and proposes a Distributed Morphology approach to tense and agreement suffixes. This proposal does not allow the adaptation of previous proposals to derive past tense morphology and the augment *e-* in Standard Modern Greek with *fission* (Spyropoulos & Revithiadou 2009).

Second, Section 3 of the paper provides the data on the Cypriot Greek augment and proposes the underlying morphosyntactic structure involved in the Cypriot Greek verb. The Cypriot Greek augment does not have lexically encoded properties, an observation supported by the distribution of the augment in verbal complexes.

2. Past Tense suffixation

To provide a more general picture of the distribution of the Past Tense morphemes in this variety of Greek, this section presents the forms of the verbs in different verb classes. In Table 1, *psín-* ‘to cook’ belongs in the first conjugation and *fil-* ‘to kiss’ belongs in the second conjugation (first class). I provide the full paradigms below that show the different agreement and past tense suffixes.

Cypriot Greek Past Tense- Active Voice				
Person	PAST, PERF	Meaning	PAST, PERF	Meaning
1sg	é-psí-s-a	‘I cooked’	e-fíli-s-a	‘I kissed’
2sg	é-psí-s-e-s	‘you cooked’	e-fíli-s-e-s	‘you kissed’
3sg	é-psí-s-en	‘he/she cooked’	e-fíli-s-en	‘he/she kissed’
1pl	e-psí-s-a-men	‘we cooked’	e-fíli-s-a-men	‘we kissed’
2pl	e-psí-s-e-te	‘you cooked’	e-fíli-s-e-te	‘you kissed’
3pl	e-psí-s-a-n	‘they cooked’	e-fíli-s-a-n	‘they kissed’
3pl	e-psí-s-a-sin	‘they cooked’	e-fíli-s-a-sin	‘they kissed’
Person	PAST, IMPERF	Meaning	PAST, IMPERF	Meaning
1sg	é-psí-n-a	‘I was cooking’	e-fíl-ú-s-a	‘I was kissing’
2sg	é-psí-n-e-s	‘you were cooking’	e-fíl-ú-s-e-s	‘you were kissing’
3sg	é-psí-n-en	‘he/she was cooking’	e-fíl-ú-s-en	‘he/she was kissing’
1pl	e-psí-n-a-men	‘we were cooking’	e-fíl-ú-s-a-men	‘we were kissing’
2pl	e-psí-n-e-te	‘you were cooking’	e-fíl-ú-s-e-te	‘you were kissing’
3pl	e-psí-n-a-n	‘they were cooking’	e-fíl-ú-s-a-n	‘they were kissing’
3pl	e-psí-n-a-sin	‘they were cooking’	e-fíl-ú-s-a-sin	‘they were kissing’

The tables above present the distribution of the past tense suffixes in the active and nonactive voice. The verbal paradigm shows consistent appearance of the augment *e-* in both two-syllable and three-syllable verbs or in other words, those that have an already existing antepenultimate syllable or not. As will be discussed in section 3, this generalization contradicts the common assumption that the augment develops for the antepenultimate stress to be attained or that the antepenultimate stress is an exponent of the [+PAST] as a segmentally empty prefix with lexically encoded stress.

Before discussing the augment, I will discuss here the suffixes on the verb that also appear to be exponents of [+PAST]. The question that arises is whether these suffixes are portmanteau suffixes for both tense and person, as also argued in Joseph & Smirniotopoulos (1993) for mediopassive morphemes in Standard Modern Greek, or whether they can be exponents of different nodes, as already presented in the tables above. For example, the first assumption would take *-es* to be the realization of tense and person, while the second approach would take *-e* as the realization of tense and *-s* as the realization of person agreement. The latter is built on the assumption that an underlying syntactic structure provides a one-to-one matching of the morphemes with morphosyntactic features.

In the derivational framework of Distributed Morphology presented here, terminal nodes are projections of morphosyntactic features in an underlying syntactic structure and are realized as phonological exponents after Vocabulary Insertion (Arregi & Nevins 2012; Embick & Noyer

Cypriot Greek Past Tense- NonActive Voice		
Person	PAST, PERF	Meaning
1sg	e-plí-θ-ik-a	'I was washed'
2sg	e-plí-θ-ik-e-s	'you were washed'
3sg	e-plí-θ-ik-en	'he/she was washed'
1pl	e-plí-θ-ík-a-men	'we were washed'
2pl	e-plí-θ-ík-e-te	'you were washed'
3pl	e-plí-θ-ik-a-n	'they were washed '
3pl	e-plí-θ-ík-a-sin	'they were washed '

Person	PAST, IMPERF	Meaning
1sg	e-plin-ísk-u-mun	'I was being washed'
2sg	e-plin-ísk-e-sun	'you were being washed'
3sg	e-plin-ísk-e-tun	's/he was being washed'
1pl	e-plin-isk-ú-mastan	'we were being washed'
2pl	e-plin-ísk-e-stun	'you were being washed'
3pl	e-plin-ísk-u-ndan	'they were being washed'

Table 1: Cypriot Greek verbal morphology in NonActive

2007; Halle & Marantz 1993). I assume that morphology works on a set of terminal nodes which represent the relevant grammatical features to be encoded. The terminal nodes are organized in a hierarchical structure, which derives from the organization of the functional categories in the syntax and it is the result of the mapping of the syntactic structure onto the exponents with Vocabulary Insertion rules after Spell-Out. In this sense, I will pursue here an analysis where tense and agreement form separate terminal nodes.

A careful look of the surface forms in Table 1 and Table 2 show a consistent pattern: the suffix *-e* appears in 2ND person and 3RD SING. Other suffixes are *-a* and *-u* with both appearing in 1ST PERSON and 3RD PL. Other combinations create unattested forms of the verb:

(4) a. é- psi -s -e -s
 PAST- cook -PERF -PAST -2SG
 'You cooked'

b. *é- psi -s -a -s
 PAST- cook -PERF -PAST -2SG
 (Int. 'You cooked')

c. é- psi -s -a -men
 PAST- cook -PERF -PAST -1PL
 'We cooked'

d. *é- psi -s -e -men
 PAST- cook -PERF -PAST -1PL
 (Int. 'We cooked')

Given the systematic alternation between these exponents, the change can be the result of morphological operations that include feature-deletion rules yielding syntactic neutralization

in surface forms. In the active voice, *-e* is clearly not associated with any author features with the common property between the two exponents being the fact that they appear in Past Tense. I will assume here that person features are as follows.

(Noyer 1992; Halle 2000; Arregi & Nevins 2007)

- (5) a. [+Author] true iff the reference set contains the speaker
- b. [+Participant] true iff the reference set contains one of the discourse participants
- c. 1st: [+participant,+author]
- d. 2nd: [+participant,-author]
- e. 3rd: [-participant,-author]
- f. 3rd: [-participant,+author]=logically impossible

The following entries are then associated with the tense suffixes.

- (6) a. *-a* \leftrightarrow [+past]
- b. *-e* \leftrightarrow [-author +past]

Impoverishment (Bonet 1991), an operation that changes the featural content of morphemes prior Spell-out, deletes certain morphosyntactic features in certain contexts. To explain the distribution of the different exponents in the past, I propose that a deletion rule applies in 3RD PL and targets the deletion of the -author feature. As a result, *e-* cannot be inserted and *a-* is inserted as the less specified morpheme (e.g. *e-psi-s-a-n*, **e-psi-s-e-n* ‘they cooked’).

- (7) [-author] \rightarrow \emptyset / ____ [+past]

The distribution of *u-* and *e-* in the nonactive imperfective will then work in a similar way, but only specified to happen in the environment specified below since *u-* would never appear in the active.

- (8) a. [+past] \leftrightarrow -*u* /Voice_[-act] Aspect_[-perf] ____ [{+1ST, +3PL}]
- b. [-author +past] \leftrightarrow -*e*

Impoverishment targets the deletion of the -author feature, resulting in the use of the less marked morpheme, namely *u-* in 3RD PL (e.g. *e-fiy-u-ndan*, **e-fiy-e-ndan* ‘they were kissing’). These assumptions are a way to explain the systematicity observed in the distribution of what is identified here as past tense suffixes.

With this analysis, there is a possible way to account for the distribution of the Tense morphemes in the past without assuming that a single exponent realizes two morphemes, that is that T realizes both Tense and agreement. In previous work, Spyropoulos & Revithiadou (2009) have argued that the augment is derived via fission targeting the fused terminal node of T marking [α agreement, (+past)]. When the [+past] feature is not discharged, fission realizes this feature on another T position, surfacing as the augment. Provided this proposal, it follows that the assumption that fission targets the fused agreement-tense node in the derivation of the past tense morphology cannot be implemented since the two nodes involved are no longer adjacent. Spyropoulos & Revithiadou (2009) also argue that the empty vocalic slot of the augment materializes under certain conditions providing a phonological form of this default exponent

of PAST. These conditions are built on the assumption that agreement and tense form a fused terminal node, which is subject to fission and that the empty prefix discharges this specification, which is the [+past] information. This does not clearly predict the restrictions of the prosodic structure, which only allow the augment *e-* to appear as a stressed antepenultimate syllable in Standard Modern Greek. Secondly, this analysis would not explain the facts, if agreement and tense were indeed separate projections, as argued here.

3. *The Past Tense augment*

3.1. *Deriving the Cypriot Greek augment*

The Past Tense augment appears only in some verbs in Standard Modern Greek, as conditioned by the number of syllables and the position of the stress (commonly called the antepenultimate stress (APU)). In this section, I show that this condition does not apply for the augment in Cypriot Greek and argue that a morphological approach can best capture the facts.

Stress in Standard Modern Greek is traditionally described as “dynamic stress” and it is acoustically manifested as longer duration or higher amplitude of the stressed syllable compared to the unstressed syllable(s) (Arvaniti 1999). Primary stress is always marked on one of the last three syllables, but its position is sometimes affected by specific morphemes (i.e. genitive suffix *u-*, past etc.). The Past Tense augment *e-* is found in two-syllable verbs that are stressed on the penult in the NonPast Tense (as in examples in Spyropoulos & Revithiadou 2009; Merchant 2015; van Oostendorp 2012; Ralli 2003). In these cases, the augment surfaces to hold the stress that retracts leftwards to the antepenultimate syllable in the past (9b). If the verb already has an antepenultimate syllable, then the stress shifts to it and the augment *e-* does not surface, as in (9d).

(9) *Standard Modern Greek*

- a. To psi -n -o.
it cook -IMPERF -NONPAST
'I cook it.'
- b. To *(é)- psi -n -a.
it PAST- cook -IMPERF -PAST
'I was cooking it.'
- c. To ðjavá -z -o.
it read -IMPERF -NONPAST
'I read it.'
- d. To (*e-) ðjáva -z -a.
it PAST- read -IMPERF -PAST
'I was reading it.'

In their analysis of the Standard Modern Greek augment, Spyropoulos & Revithiadou (2009) propose that:

“the default exponent of PAST is a segmentally empty prefix with lexically-encoded accentual properties. Under certain conditions, the empty vocalic slot of the prefix materializes” (Spyropoulos & Revithiadou 2009:3).

Contrary to this proposal, the augment in Cypriot Greek does not actually carry lexical-encoded accentual properties. The Cypriot Greek augment *e-* appears as the antepenultimate syllable in two-syllable verbs (10b) and seems at a first glance to serve again stress-related purposes, as in Standard Modern Greek. However, it also appears in three-syllable verbs where the antepenultimate syllable is stressed, but the augment remains unstressed, as in (10d).

(10) *Cypriot Greek*

- a. psi -n -o to.
cook -IMPERF -NONPAST it
'I cook it.'
- b. *(é-) psi -n -a to.
PAST- cook -IMPERF -PAST it
'I was cooking it.'
- c. θcáva -z -o to.
read -IMPERF -NONPAST it
'I read it.'
- d. *(e-) θcáva -z -a to.
PAST- read -IMPERF -PAST it
'I was reading it.'

The difference observed here concerns our understanding of the augment as either a morpho-phonological phenomenon or an exponent of Past Tense that depends on a particular morphosyntactic structure. Similarly, the use of the augment in Ancient Greek was conceptualized in a different way than the corresponding Standard Modern Greek use. As Joseph & Janda (1988) mention "the augment, therefore, must be considered to be present in the underlying morphological structure of Ancient Greek past tense forms; furthermore, its occurrence there is not linked to any phonological feature(s)"(Joseph & Janda 1988: 198). This point emphasizes exactly that augments in languages that have them should not necessarily be seen as a phonological phenomenon provided the existence of the augment throughout the paradigm and not only under certain phonological conditions. Joseph & Janda (1988), for example, add that in a similar way the German *ge-*, as in (11), "has remained a morphological rule, albeit one with greater phonological conditioning"(Joseph & Janda 1988:201).

(11) a. Ich komme mit dem bus
I come with the bus
'I am coming with the bus.'

b. Ich bin mit dem bus ge- kommen
I be with the bus AUG- come
'I have come with the bus.'

In this sense, this case of the Cypriot Greek augment is especially interesting in documenting and providing an analysis for its appearance based on the morphosyntactic structure of the verb.

Cypriot Greek shows a different distribution of the augment compared to its use in Standard Modern Greek in that the Cypriot Greek augment is a Past Tense exponent which surfaces independently of stress. It depends on both the root and the suffixes, and not the root alone. This cannot be seen in Cypriot Greek given the augment's obligatory presence, but the restrictions

in Standard Modern Greek show the pattern in the following example. Example (12) shows a one-syllable root and example (13) a two-syllable root.

(12) a. stel -o
send -NONPAST-1SG
'I am sending.'

b. e- stil -a
PAST- send -PAST-1SG
'I sent.'

c. stil -a -me
send -PAST -1PL
'We sent.'

(13) a. xore -v -o
dance -IMPERF -NONPAST-1SG
'I am dancing.'

b. xore -ps -a
dance -PERF -PAST-1SG
'I danced.'

c. xore -ps -a -me
dance -PERF -PAST -1PL
'We danced.'

In (12b), the suffix that follows the root is one syllable, but in (12c) the suffixes that follow the root form two syllables. The augment appears only in (12b), but it does not when the suffixes that follow the root form more than one syllable. This clearly shows that the augment *e-* in Standard Modern Greek is conditioned by the count of syllables of the stem, and not the root, as argued in Spyropoulos & Revithiadou (2009). On the other hand, (13) shows a two-syllable root with (13b) having a one-syllable suffix and the suffixes in (13c) forming two syllables. As expected, the augment does not appear in any of these, since these examples already consists of three syllables. The following rules predict the distribution of the augment in Cypriot Greek:

(14) a. T[+PAST] →e/___C
b. T→∅

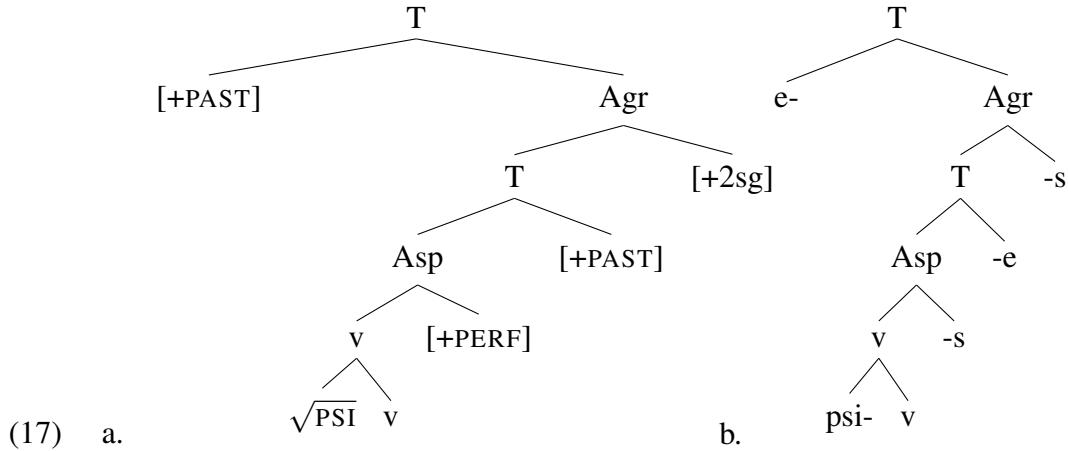
By the Elsewhere principle, which is based on the featural content or context of insertion being devoid of information and acting as the default, vowel-initial verbs will not show *e-*, as in the following example:

(15) a. ayap ó.
love NONPAST-1SG
'I love.'

b. (*e)- ayápi s- a.
PAST- love PERF- PAST-1SG
'I loved.'

The following trees illustrate the appearance of the augment *e-* in Cypriot Greek.

(16) é- psi -s -e -s
 PAST- cook -PERF -PAST -2SG
 'You cooked (it).'



The Cypriot Greek augment *e-* is an exponent of [+PAST], as illustrated above, in an underlying structure where T and Agr form a fused terminal node.

3.2. Tense and Aspect

The differences in the syntactic distribution of the Past Tense augment between Standard Modern Greek and Cypriot Greek show that previous analyses that concern its co-occurrence with other morphemes in the structure also face problems with these data. It has been previously observed that the [+PERF] morpheme does not co-occur with the Past Tense augment in Standard Modern Greek independently of the number of syllables and the position of the stress.

(18) a. stráf -ik -a
 throw-up -PERF -PAST
 'I threw up'

b. * e- stráf -ik -a
 PAST- throw-up -PERF -PAST
 (Int. 'I threw up')

c. mb -ík -a
 enter -PERF -PAST
 'I entered.'

d. * e- mb -ík -a
 PAST- enter -PERF -PAST
 (Int. 'I entered.') Standard Modern Greek

The example in (18b) is not well-formed because of the Trisyllabic rule that allows stress to be positioned in a three-syllable window and *estrafika* consists of four syllables, assigning the stress on the antepenultimate syllable *straf-*. In (18d), however, the augment does not appear, even though it could form the antepenultimate syllable and hold the stress as predicted by the general rule found in the language. Spyropoulos & Revithiadou (2009) argue that the

Cypriot Greek perfective <i>-ik</i> , 2ND PERSON SINGULAR			
Root	PAST, NONACTIVE	PAST, NONACTIVE	Meaning
<i>skoto-</i>	e- skotó -θ - ik -e -s	e- skotó-θ -∅ -i -s	‘you were killed’
<i>fakk-</i>	e- fatſí -θ - ik -e -s	e- fatſí-θ -∅ -i -s	‘you were hit’
<i>sandano-</i>	e- sandanó -θ - ik -e -s	e- sandanó -θ -∅ -i -s	‘you were confused’
<i>ayap</i>	ayap -í -θ - ik -e -s	ayapí -θ -∅ -i -s	‘you were loved’
h <i>psi-</i>	e- psí -θ - ik -e -s	e- psí -θ -∅ -i -s	‘you were cooked’
<i>vaf-</i>	e- váf -t - ik -e -s	e- váf -t -∅ -i -s	‘you were painted’
<i>pandrev-</i>	e- pandréft - ik -e -s ³	e- pandréft -∅ -i -s	‘you were married’
<i>pe-</i>	e- péxt - ik -e -s	e- péxt -∅ -i -s	‘you shot yourself’
<i>mbe-</i>	é- mb - ik -e -s	é- mb -∅ -i -s	‘you entered’
<i>su-</i>	e- súst - ik -e -s	e- súst -∅ -i -s	‘you were shaken’
<i>ksev-</i>	e- ksév - ik -e -s	e- ksév -∅ -i -s	‘you got up on something’

Table 2: The perfective *-ik* in 2ND PERSON SINGULAR

competition between insertion of the augment and insertion of *-ik* and the win of the latter can be explained if it is seen as a more specified, in terms of features, morpheme, i.e. [+PAST, (+PERF)]. With both being past tense exponents, *ik*- is selected by perfective aspect. The augment is only specified for [+PAST], therefore insertion of *-ik* wins in perfective forms as the most specified morpheme.

In Cypriot Greek, the perfective *-ik* is optional² in the non-active forms of 2nd & 3rd SING. This clearly shows that *θik*- is not a single morpheme in Cypriot Greek (see Joseph & Smirniotopoulos 1993; Roussou 2009; Warburton 1973; Ralli 2005 for Standard Modern Greek) and that the augment has a morphological role in the underlying structure that is not affected by any other morpheme. This optionality seems to be the result of contextual allomorphy and the form of the tense morpheme. Realization of the tense exponent is sensitive to aspect, since the tense morpheme appears as *-e* or *-i*. In the cases where aspect surfaces null, the tense morphemes appear as *-i*; when aspect surfaces as *-ik*, then it surfaces as *-e* (see Pavlou (ms.)). Table 3 and Table 4 show a few examples, where the verb form optionally surfaces with *-ik* in 2ND and 3RD PERSON SINGULAR.

As expected, the Cypriot Greek augment distribution is not affected by the alternation from two- to three-syllable verbs stems.

(19) a. e- stráf -**ik** -e -n
 PAST- return -PERF -PAST -AGR
 ‘He returned.’

b. e- stráf -i -n
 PAST- return -PAST -AGR
 ‘He returned.’

²This is a marked option for Standard Modern Greek only for certain verbs that also show an unstressed past *-e* similar to Cypriot Greek, such as *e-θeáθ-i* ‘was seen’, *e-vréθ-i* ‘was found’, *e-yenníθ-i* ‘was born’, *e-kláp-i* ‘was stolen’, *i-kús-θ-i* ‘was heard’, *e-léx-θ-i* ‘was said’ etc. (Leivada, pc). In these examples, *-i* marks 3rd SINGULAR.

Cypriot Greek perfective <i>-ik</i> , 3RD PERSON SINGULAR <i>he/she/it</i>			
PAST, NONACTIVE	PAST, NONACTIVE	Meaning	
skoto-	e- skotó-θ -ik -e -(n)	e- skotó-θ -∅ -i -(n)	's/he was killed'
fakk-	e- fatſí-θ -ik -e -(n)	e- fatſí-θ -∅ -i -(n)	's/he was hit'
sandano-	e- sandanó-θ -ik -e -(n)	e- sandanó-θ -∅ -i -(n)	's/he was confused'
ayap-	ayapí-θ -ik -e -(n)	ayapí-θ -∅ -i -(n)	's/he was loved'
psi-	e- psí-θ -ik -e -(n)	e- psí-θ -∅ -i -(n)	'it was cooked'
vaf-	e- váf-t -ik -e -(n)	e- váf-t -∅ -i -(n)	's/he was painted'
pandrev-	e- pandré-ft -ik -e -(n)	e- pandré-ft -∅ -i -(n)	's/he was married'
pe-	e- péxt -ik -e -(n)	e- péxt -∅ -i -(n)	'it was played'
mbe-	é- mb -ik -e -(n)	é- mb -∅ -i -(n)	's/he entered'
su-	e- súst -ik -e -(n)	e- súst -∅ -i -(n)	'it was shaken'

Table 3: The perfective *-ik* in 3RD PERSON SINGULAR

- c. * stráf **ik** -e -n
return -PERF -PAST -AGR
'He returned.'
- d. * stráf -i -n
return -PAST -AGR
'He returned.'

The Vocabulary items for the insertion of *ik*- in Cypriot Greek given its distribution are as follows:

(20) a. Aspect[+PERF]↔ik/Voice[-ACT]__
b. Aspect[+PERF]↔∅/Voice[-ACT]__-i

It is clear that *e*- does not compete with *-ik* in irregular verbs in Cypriot Greek, as in (21)⁴.

(21) a. mbén -o
enter NONPAS-1SG
'I am entering.'

b. e- mb **-ik** -a
PAST- enter -PERF -PAST-1SG
'I entered.'

This shows that an analysis where in the competition of the two, *-ik* is defined as the more specified morpheme and blocks insertion of the augment, is not supported and that *-ik* is in fact the exponent of perfective aspect.

⁴The stress in (21b) can surface either on the augment or the aspectual morpheme.

3.3. The augment in verbal complexes

The augment *e*- can appear in two positions in verbal complexes⁵ when the verb combines with an adverb⁶. In these cases, *e*₂- can be omitted, but when it is present and serves as the antepenultimate syllable, it holds the stress. The preverbs *psil-*, *mis-*, *poll-* are also free morphemes used as adjectives (e.g. *psilo xtirio* ‘tall building’) and *kal-*, *siy-* can be used as adverbs (e.g. *parpato siya* ‘I walk slowly’).

(22) a. E₁- psil- o- (e₂-) psi -s -a to.
 PAST- little- CM- PAST.1SG- cook -PERF -PAST.1SG it
 ‘I barely cooked it.’

b. E₁- mis- o- (e₂-) psi -s -a to.
 PAST- half- CM- PAST- cook -PERF -PAST.1SG it
 ‘I half cooked it.’

c. E₁- kal- o- (e₂-) psi -s -a to.
 PAST- good- CM- PAST- cook -PERF -PAST.1SG it
 ‘I cooked it well.’

d. E₁- poll- o- (e₂-) psi -s -a to.
 PAST- much- CM- PAST- cook -PERF -PAST.1SG it
 ‘I cooked it a lot.’

e. E₁- para- (e₂-) psi -s -a to.
 PAST- over- PAST- cook -PERF -PAST.1SG it
 ‘I overcooked it.’

f. E₁- siy- o- (e₂-) psi -s -a to.
 PAST- slow- CM- PAST- cook -PERF -PAST.1SG it
 ‘I slow-cooked it.’

In (22), the stress surfaces on the augment since the verb *psín-* ‘to cook’ belongs in the first conjugation where stress is found on the penult. In fact, when the stress is on the final syllable then stress shifts to the penultimate syllable as in *ksana-pon-ó* > *e*₁-*ksana-(e*₂-)*pón-u-n* ‘I was in pain again’. So, stress always retracts a syllable to the left in the past. As seen in (23), the augment does not appear in non-past. The non-past expressed with *en na* is syntactically periphrastic in Cypriot Greek, characterized by the copula and a subordinating element (Merchant & Pavlou 2017, Terzi 1999) and uses a different set of suffixes compared to the Past Tense (i.e. *o*- for 1ST PERSON).

⁵When referring to the *e*- on the immediate left of the first member of the compound, it is indicated with *e*₁, while *e*₂ refers to the augment to the immediate left of the root. The underscore signifies the possible positions of the stress based on which one of the two positions acts as the antepenult.

⁶-*o*- is glossed as a *compound marker*, which is a linking vowel commonly found in compounds (Ralli & Karasimos 2009). The compound marker is inserted as -*o*- in most cases, independently of the gender of the noun that follows. For example, *kóptis* ‘cutter’ has masculine gender and *nix-o-kóptis* ‘nail cutter’ is marked with -*o*- . Similarly, a noun like *tsénda* ‘bag’, despite having feminine gender, also appears with -*o*- in a compound like *pay-ó-tsénda* ‘old/useless bag’. When ‘old’ acts as an adjective to the noun, then the feminine suffix appears on both the adjective and the noun *paya tsénda* ‘old bag’. Cases like these have been argued to be adverb incorporation cases in the VP (Rivero 1994). For English, see Bochnak 2013 for scalarity of ‘half’ in the VP.

(23) a. En na to psil- o- psí -s -o.
 be C it little- CM- cook -PERF -NONPAST.1SG
 'I will barely cook it.'

b. En na to mis- o- psí -s -o.
 be C it half- CM- cook -PERF -NONPAST.1SG
 'I will half cook it.'

c. En na to kal- o- psí -s -o.
 be C it good- CM- cook -PERF -NONPAST.1SG
 'I will cook it well.'

d. En na to poll- o- psí -s -o.
 be C it much- CM- cook -PERF -NONPAST.1SG
 'I will cook it a lot.'

e. En na to para- psí -s -o.
 be C it over- cook -PERF -NONPAST.1SG
 'I will overcook it.'

f. En na to siy- o- psí -s -o.
 be C it slow- CM- cook -PERF -NONPAST.1SG
 'I will slow-cook it.'

There are no restrictions on the appearance of the augment in these cases in three syllable verbs, as is already predicted by the basic distribution seen in the previous section.

(24) a. E₁- psil- o- (e₂-) θkjáva -s -a.
 PAST- little- CM- PAST- read -PERF -PAST.1SG
 'I studied a little.'

b. E₁- mis- o- (e₂-) θkjáva -s -a.
 PAST- half- CM- PAST- read -PERF -PAST.1SG
 'I studied enough, but not everything.' [lit. I half studied.]

c. E₁- ksana- (e₂-) θkjáva -s -a.
 PAST- again- PAST- read -PERF -PAST.1SG
 'I studied again.'

Another case where the PAST can surface in two positions is with the use of *ksana* 'again', which also forms a compound with the verb. Unlike the cases seen above, the compound marker *o*- does not show up with the use of *ksana*, since the vowel *a*- is part of the root and a vowel does not need to be inserted between the two members of the compound. Unlike *ksana*, *a*- is not always part of the root and this can be seen by the appearance of the *e*₂-, as in *met-á-* 'after', *e₁-metá-lav-a* > *e₁-met-é₂-lav-a* 'to receive communion' and in *par-a-*, *e₁-par-á-lav-a* > *e₁-par-é₂-lav-a* 'to receive'.

(25) a. En na to ksana- psí -s -o.
 be to it again- cook -PERF -NONPAST.1SG
 'I will cook it again.'

b. E₁- ksana- (e₂-) psi -s -a to.
 PAST- again- PAST- cook -PERF -PAST.1SG it
 'I cooked it again.'

NON-PAST, PERF	PAST,PERF	PAST,PERF, + <i>e</i> ₂	Meaning
tsul-o-káts-o	e ₁ -tsul-ó-kats-a	e ₁ -tsul-o-é ₂ -kats-a	‘to sit with knees bent’
γaur-o-mnjá-z-o	e ₁ - γaur-ó-mnja-s-a	e ₁ - γaur-o-é ₂ -mnja-s-a	‘to look like a donkey’
anav-o-svín-o	anav-ó-svin-a	anav-o-é ₂ -svin-a	‘to flicker’
tfiy-o-pon-ó	e ₁ -tfiy-o-pón-u-n	e ₁ -tfiy-o-e ₂ -pón-u-n	‘to have a stomachache’
xask-o-γel-ó	e ₁ -xask-o-γél-u-n	e ₁ -xasko-o-e ₂ -γél-u-n	‘to gape and laugh’

Table 4: Verbal complexes

NON-PAST, PERF	PAST,PERF	PAST,PERF, + <i>e</i> ₂	Meaning
xar-o-palé-fk-o	e ₁ -xar-o-pále-ps-a	e ₁ - xar-o-(e ₂ -)pále-ps-a	‘to be at death’s door’
γlik-o-kitá-z-o	e ₁ -γlik-o-kítá-ks-a	e ₁ - γlik-o-(e ₂ -)kítá-ks-a	‘to have a sweet gaze’
strif-o-γirí-z-o	e ₁ -strif-o-γíri-z-a	e ₁ - strif-o-(e ₂ -)γíri-z-a	‘to whirl around’
kli-o-stomnjá-z-o	e ₁ -kli-o-stómnia-s-a	e ₁ -klio-o-(e ₂ -)stómnia-s-a	‘to stop talking’

Table 5: Verbal complexes with three-syllable verb stems

c. En na to ksana- pé -ps -o.
 be to it again- send -PERF -NONPAST.1SG
 ‘I will send it again.’

d. E₁- ksana- (e₂-) pe -ps -a to.
 PAST- again- PAST- send -PERF -PAST.1SG it
 ‘I sent it again.’

Double augments also appear in compounds⁷ which show once again that the *e*₂- does not have to be stressed. In the following example, the stress is on the final syllable in the NonPast and retracts one syllable to the left in the Past. When *e*₂- is present, it is unstressed.

(26) a. I Patu tsiy- o- pon -á kaθi mera.
 the Patu abdomen- CM- hurt -NONPAST every day
 ‘Patu has a stomachache every day.’

b. I Patu e₁- tsiy- o- (*e*₂-) pón -e -n extes.
 the Patu PAST- abdomen- CM- PAST- hurt -PAST -AGR yesterday
 ‘Patu had a stomachache yesterday.’

The following tables show more examples with two-syllable & three-syllable verb stems, irregular and suppletive verbs that are part of N-V and V-V verbal complexes. The focus here is the distribution of the augment in two positions with nouns and verb serving as the first compound in the verbal complex.

⁷In Modern Greek, these V-V combinations are phonologically and morphologically true compounds since they have a single stress and a single inflection site, on the right edge of the second member. Further, the appearance of the linking vowel -o is exactly what is found in other compounds in Modern Greek (Nicholas & Joseph 2009).

The double appearance of *e*- confirms that it does not surface to only hold the stress in Cypriot Greek and that it is not affected by the classification of other prefixes. These data support the generalization for an unstressed augment in the past tense morphology of the verb, contrary to the idea that the augment bears lexically-encoded stress. The derivation of the reduplication facts of the augment remains a question for future work.

4. Conclusion

This squib has examined the distribution of the Past Tense augment in Cypriot Greek, a non-standard variety of Greek. The data presented here show that previous proposals on the derivation of the Past Tense augment in Standard Modern Greek do not capture the new facts presented here. Instead, a different approach is proposed to capture the distribution of the Cypriot Greek augment and the past tense suffixes.

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